## Message

From: Emilsson, Gunnar [EmilssonGR@cdmsmith.com]

**Sent**: 5/31/2018 9:51:21 PM

To: Roux IT [mritorto@rouxinc.com]; Dick Sloan [rsloan@mt.gov]; Cirian, Mike [Cirian.Mike@epa.gov]; Sanchez, Brian

[sanchez.brian@epa.gov]; Berry, David [Berry.David@epa.gov]; John.Stroiazzo@glencore.ca; Steve Wright - CFAC [swright@cfaluminum.com]; Skipper, Sherry [Skipper.Sherry@epa.gov]; Andrew Baris [abaris@rouxinc.com]; Laura

Jensen [ljensen@rouxinc.com]

CC: Lynn Woodbury [woodburyl@cdmsmith.com]; Coan, Sean [CoanSM@cdmsmith.com]; Erin Formanek

[Formanekek@cdmsmith.com]

**Subject**: FW: CFAC Background Investigation SAP - Comments

Importance: High

## CFAC/Roux team:

On behalf of Mike Cirian, below please find our comments (EPA and CDM Smith) to the surface water portion of the CFAC Background Investigation Sampling and Analysis Plan (SAP). Note we received the SAP last Friday (May 25) with the understanding that CFAC/Roux wishes to begin surface water sampling on Monday, June 4. Therefore, we expedited our review focusing on this portion of the SAP, with the goal that if we can resolve these comments during tomorrow's call, EPA can conditionally approve this sampling.

Regarding the soils and other sampling described in the SAP, we need additional time to discuss internally as some of our team has been unavailable this week due to field work and other commitments. We can discuss some of our initial comments on tomorrow's call after we get through the surface water comments in an effort to provide better focused comments in the near future.

Looking forward to tomorrow's discussion,

## Gunnar Emilsson, P.G., P.E., BCEE

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From: Coan, Sean

Sent: Thursday, May 31, 2018 2:31 PM

To: Emilsson, Gunnar <EmilssonGR@cdmsmith.com>
Cc: Woodbury, Lynn <woodburyl@cdmsmith.com>
Subject: CFAC Background Investigation SAP - Comments

Importance: High

Gunnar,

The email below offers our comments on the Background Investigation SAP to be submitted to EPA and Roux.

Thanks,

-Sean

From: Woodbury, Lynn

**Sent:** Thursday, May 31, 2018 1:18 PM **To:** Coan, Sean < CoanSM@cdmsmith.com>

Subject: CFAC Bkg SAP Comments

As requested, CDM Smith has reviewed the draft Background Investigation SAP for the Columbia Falls Superfund Site. We have a number of concerns with the data quality objectives (DQOs), proposed statistical evaluation approach, and the identified reference areas for soil. However, in light of the time-critical need to collect background surface water under high flow conditions (which is occurring right now), we recommend EPA provide conditional approval of only the surface water sample collection effort at this time. This will allow for the collection of these time-critical high flow water samples, while still allowing for continued discussion and resolution of other comments on the SAP that are less time critical in nature. In that regard, while we agree with the proposed surface water background areas, the following comments specific to the high-flow surface water sampling effort are provided:

- 1. Figure 6 includes two different areas identified as background locations similar to Cedar Creek (i.e., a location in the headwaters of Cedar Creek and a location in Trumbull Creek). The text does not discuss the location in Trumbull Creek. Please clarify why there are two background locations identified and if both locations will be sampled.
- 2. Section 2.3 The DQOs specify that 10 samples will be collected for each reference area, but there is no rationale provided as to how this target sample size was determined. Please provide additional information to support the assertion that 10 samples will be adequate to meet the specified tolerable decision error limits identified in the DQOs. In addition, the text should provide the variability assumption under which this sample size determination was based (i.e., what was the underlying assumption of the coefficient of variation?).
- 3. Section 4.2.3 This section provides no discussion of how or where the 10 surface water samples will be collected for each background area (e.g., will 10 samples be collected at 10 different locations in the area? Will all 10 samples/area be collected contemporaneously, or distributed between high and low water events?). Please clarify the sampling approach.
- 4. Section 4.2.3 This section does not discuss the fact that sampling will require the collection of a sample for both total recoverable and dissolved metals analysis. Please clarify the sample collection methods.
- 5. Section 4.4 The DQOs provide no discussion or rationale as to why the proposed water quality parameters (as listed in Section 4.4) are being collected. It is assumed hardness data is being collected to allow for better interpretation of hardness-dependent metals toxicity and the other water quality parameters are being collect to ensure comparability of background locations to site conditions. Please provide the necessary rationale to support the collection of water quality data.

We look forward to discussing these comments further on tomorrow's call.

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